SPARC
Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises

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POLICY BRIEF

TARGETING INDIVIDUALS OR COMMUNITIES?

Learnings from AfriScout to improve pastoralist well-being

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Key messages

- AfriScout supports pastoralists through two intervention models: **AfriScout Regen**, in Ethiopia, which provides intensive and localised grazing support at a community level; and **AfriScout Steward**, in Kenya, an app providing information on rangeland conditions to inform individuals' grazing and migration decisions.
- AfriScout Regen has had strong positive impacts on rangeland conditions, with subsequent positive impacts on herd conditions, herd value and pastoralists' well-being. A key precondition for Regen's success is the strength and influence of existing structures for collective decision-making.
- The impact of AfriScout Steward on migration outcomes and herd conditions is inconclusive, but the app is greatly valued by pastoralists. High rates of information sharing indicate the potential for scalability, though success also depends on digital literacy and information relevance.
- Policy-makers should consider scaling the multi-paddock approach used by AfriScout Regen. More research and refinement of AfriScout Steward is recommended for the app to better support pastoralist decision-making.

AfriScout Steward Training in Mosiro, Kajiado County, 2025
Photo credit: Brian Odhiambo

Introduction

Pastoralism is a critical livelihood and economic activity in East Africa, yet rapid changes in arid and semi-arid regions are making pastoralism increasingly precarious. The 2020–2023 protracted drought (the most severe in recent history) and subsequent flooding in 2023 caused extensive damage to pastoral livelihoods. Millions of livestock were lost and there were devastating effects on households through malnutrition (OCHA, 2023; 2024). It is also known that climate shocks are exacerbated by armed conflict, livestock diseases, macroeconomic crises and population growth (OCHA, 2023; Strouboulis et al., 2023). Given these challenges, innovations are needed that enhance pastoralists' resilience and adaptability.

To this end, Global Communities, a non-profit organisation, supports pastoral communities in East Africa through two distinct models under its AfriScout programme. **AfriScout Regen**, implemented in Ethiopia, provides intensive community-level grazing support using an adaptive multi-paddock (AMP) grazing approach adapted to suit semi-nomadic pastoralism. **AfriScout Steward**, implemented in Kenya, provides pastoralists with near real-time information on rangeland conditions through a mobile app to inform grazing and migration decisions. While both models are designed to support better and informed migration decision-making among vulnerable pastoral communities, they differ in focus and in implementation cost and effort.

Creation of a shared grazing plan in a community in Ethiopia.
Photo credit: AfriScout

To better understand the causal impacts of the two models, Causal Design conducted a two-year, mixed-methods impact evaluation funded by Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises (SPARC). The study comprised a **cluster-level randomised control trial (cRCT)** to compare outcomes between treatment and control groups; and a **qualitative inquiry** to examine key mechanisms and causal pathways to change. Baseline data was collected in January–February 2023 and endline data was collected in February–March 2025.

The overall goal of the evaluation was to identify **attributable outcomes** of AfriScout on **pastoralist decision-making** and subsequent impacts on **rangeland conditions** and **herd conditions**. The study also examined effects on pastoralists' financial and non-financial well-being as secondary outcomes of interest, including aspects such as herd value, income, resilience and conflict. See the *AfriScout Steward and Regen impact evaluation technical report* (Uribe et al., 2025) for more information on the study and its findings.

What is AfriScout Regen?

AfriScout Regen, first implemented in Ethiopia in 2022, provides intensive, hands-on grazing planning support at the community level. The programme begins by defining regenerative grazing units (RGUs) within pastoralist communities with rangeland stewardship responsibilities (typically at the *kebele* or ward level). Each RGU is led by a management committee that, supported by AfriScout Field Agents, is responsible for developing and implementing communal seasonal grazing plans.

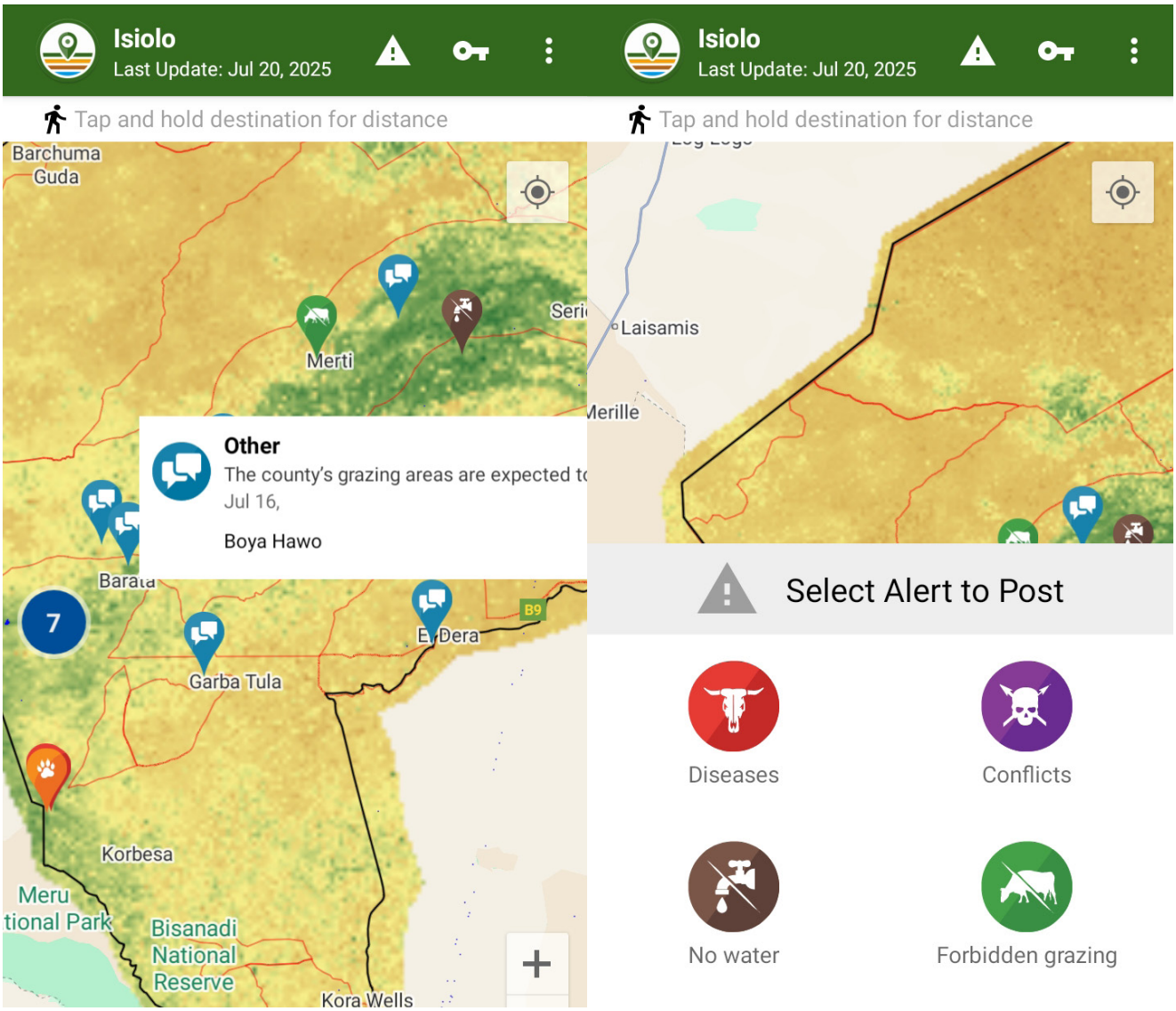
Grazing plans follow a contextualised AMP grazing approach to prevent overgrazing and allow rangelands to regenerate. In particular, rangelands are divided into 'virtual paddocks' for rotational grazing, and communities pool animals to graze them in the same area. As such, AfriScout Regen targets communities, leveraging collective action to restore rangelands. The approach builds on indigenous systems of collective rangeland management that were implemented historically in southern Ethiopia, but which have fallen out of use over recent generations due to climate change and sedentarisation (Dika Godana, G., 2016).

As the first time the AMP approach has been implemented among marginalised pastoral communities across wide swaths of shared rangelands, AfriScout Regen is pioneering. Global Communities is also currently developing an app to support implementation of Regen's shared grazing plans, and partnering regenerative efforts with carbon credit programmes to provide communities with additional sources of income.

What is AfriScout Steward?

AfriScout Steward, first launched in Kenya in 2018, is an interactive app that provides satellite and crowd-sourced information on rangeland conditions and hazards to inform grazing and migration. AfriScout Steward does not provide advice; rather, it provides near real-time information that pastoralists can integrate into individual or collective decision-making around grazing, migration and other aspects of herd and rangeland management. The app is a low-cost intervention relative to drought response or resiliency interventions, such as food assistance or destocking programmes.

AfriScout Steward was co-designed with pastoralists and revised following field piloting to ensure accessibility, value and utility for its target users. The app provides vegetation maps showing pasture conditions and surface water, based on satellite imagery (updated every 10 days), and crowd-sourced 'Alerts' to flag instances and locations of hazards (such as disease, conflicts, predators and restricted grazing), plus other local conditions or news. Local Field Agents are instrumental in raising awareness of the app, in recruiting new users, and in providing ongoing troubleshooting and support to users.



Screenshots of the AfriScout Steward mobile app. Photo credit: AfriScout

What are the impacts of AfriScout Regen?

The Causal Design evaluation shows that AfriScout Regen has had a large and statistically significant impact on rangeland management, rangeland condition and herd condition. Figure 1 presents some primary indicators.

There is high uptake of hands-on grazing planning advice

AfriScout Regen has been highly successful in establishing shared grazing plans within communities, with 98% of treatment households having reported that they have a shared grazing plan. Adherence to shared grazing plans appears to be high, which can be attributed to stewardship and enforcement by RGU leaders, as well as observed positive outcomes that serve as motivators. AfriScout Regen has also impacted collective decision-making on rangeland management, with treatment households 41 percentage points more likely to make decisions communally.

Shared grazing plans positively affect rangeland conditions

The evaluation shows an 83 percentage-point difference between treatment and control households for those satisfied with the quality of pasture they access for their livestock. Respondents in qualitative interviews frequently reflected on positive changes in rangeland conditions, which they attributed to AfriScout Regen. In particular, changes stem from the adoption of the AMP grazing approach, which has led to regeneration by allowing rangelands to rest and recover.

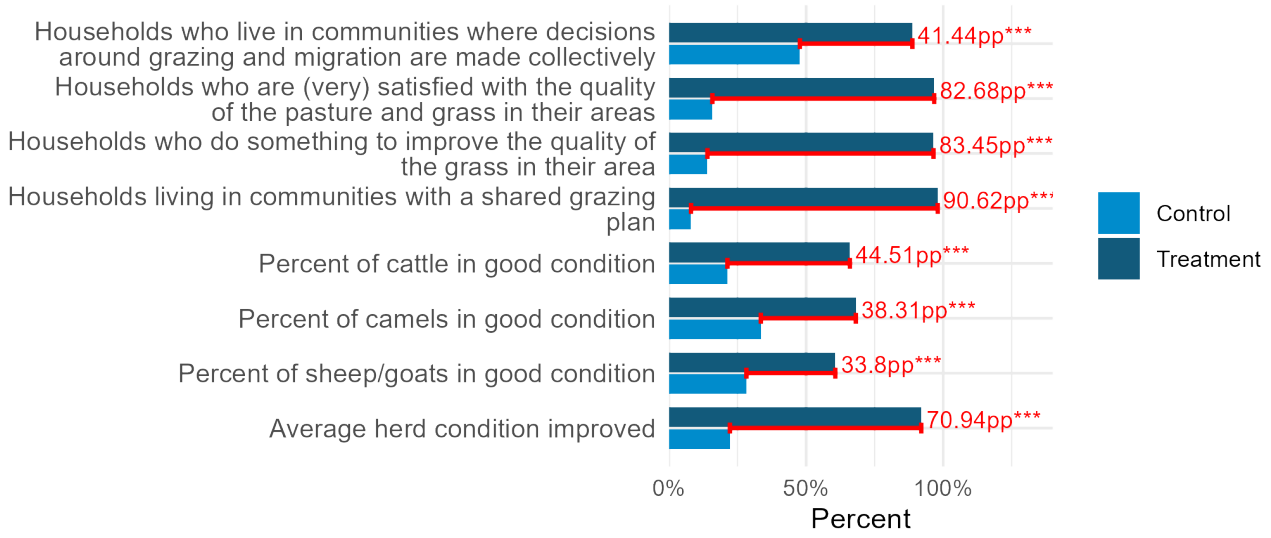
Improved rangeland conditions have led to improvements in herd conditions

Treatment households reported overwhelmingly that they have seen improvements in herd health and condition, which they attributed to improved pasture quality. Higher proportions of herds were in good condition in treatment households compared to control households, with the largest impact seen in cattle.

AfriScout Regen has cascading positive effects on pastoralists' well-being

Positive impacts on herd conditions have translated directly into substantial increases in herd size and monetary value for treatment households. The monetary value of treatment households' herds is 57% higher than that of control households. Qualitative respondents also reported increased income from livestock and livestock products and reduced costs from livestock care, due to improvements in herd condition and productivity. AfriScout Regen has led to improvements in food security and household resilience too, and reduced reliance on distressing coping strategies.

FIGURE 1. AFRISCOUT REGEN PRIMARY INDICATORS



Notes: The p-value column indicates the likelihood that the observed effect occurred by chance if the intervention had no real impact. A smaller p-value suggests greater confidence in a real effect. Thresholds for statistical significance are typically: * (10% level), ** (5% level), and *** (1% level).

Source: Uribe et al., (2025)

The qualitative results also show positive effects on non-financial well-being, such as reduced time burdens of livestock care, and greater cooperation and reduced conflict between community members. The reduction in conflict has been partially caused by a lower need for pastoralists in treatment areas to migrate. However, some respondents noted that the positive effects of AfriScout Regen on rangeland conditions could unintentionally attract migration from neighbouring communities to RGU-managed areas.

What are the impacts of AfriScout Steward?

During the study period there was significant uptake of AfriScout Steward among pastoralists trained to use the app. Qualitative data indicates that AfriScout Steward has led to positive outcomes on migration success, herd condition and other factors. However, the results show few statistically significant impacts, likely due to high contamination (many control households heard of and began using the AfriScout app) and unusually high rainfall during the study period that affected all households. High awareness of the app among control households can nonetheless be viewed as a success, demonstrating AfriScout Steward's relevance to pastoralists. Figure 2 presents some primary indicators.

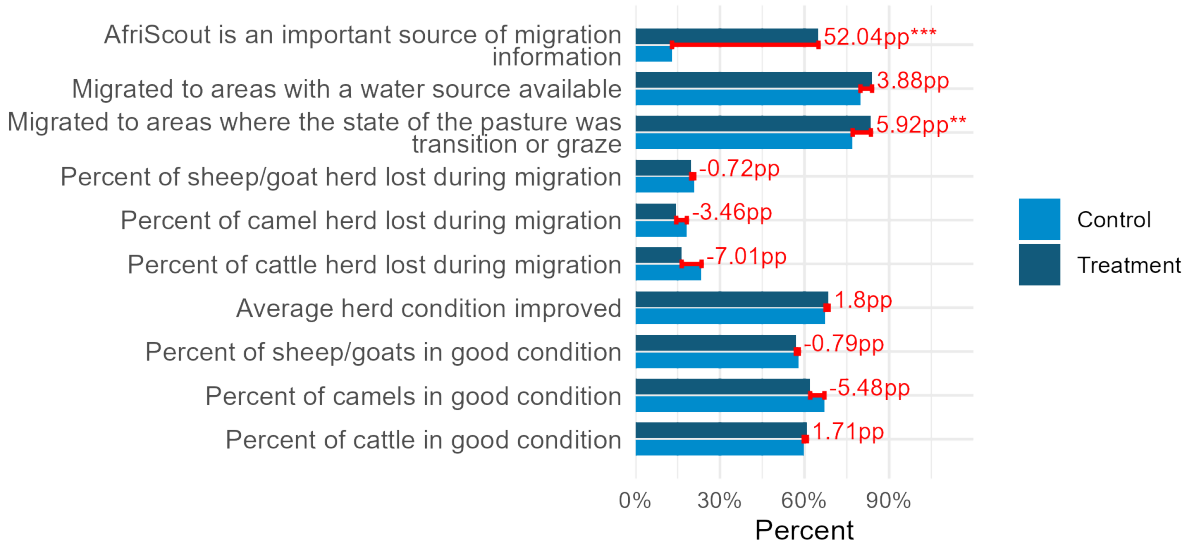
There is high uptake of AfriScout Steward

App users value AfriScout Steward and its information, with 65% of treatment households (defined as those trained in the use of the app) considering it an important source of migration information. In particular, users value the app for its accuracy and ability to save time when making migration-related decisions. App users integrate AfriScout information into their decisions around migration location and timing, particularly information relating to vegetation conditions, water sources and weather forecasts.

There is some evidence that AfriScout Steward improves migration success

Quantitative data shows few significant differences between treatment and control households from their last migration (based on indicators such as proportion of livestock lost, and finding a water source and insufficient pasture). However, treatment households were slightly (6 percentage points) more likely to migrate to areas where the state of pasture was in transition or graze stages (the best and second-best types of land). Moreover, qualitative data indicates that AfriScout Steward has led to positive outcomes on grazing – respondents recalled how the app has helped them identify appropriate times to migrate as well as appropriate grazing locations, particularly during the dry season.

FIGURE 2. AFRISCOUT REGEN PRIMARY INDICATORS



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Source: Uribe et al., (2025)

Quantitative data is inconclusive on improved herd condition

Herd condition improved for both treatment and control groups during the study period. A similar percentage of respondents from both groups reported seeing improvements over the last year (around 68% each), and similar proportions of livestock in good condition across both groups (ranging from around 57% to 67%). Due to the lack of a detectable treatment effect, these improvements cannot be attributed solely to the intervention. However, qualitative respondents often attributed improvements in herd condition to improved access to high-quality pasture from using the AfriScout app. Instances of livestock disease were also reported to have decreased, due to the app's disease outbreak alerts.

Some evidence of cascading positive effects on pastoralists' well-being

Qualitative respondents reported financial benefits of using AfriScout Steward, including cost savings (from reduced need for supplemental feed, veterinary care and scouting) and increased income (from improved livestock conditions and their ability to make strategic livestock selling decisions). These respondents also noted positive effects on conflict and collaboration between pastoralists, food security, human–wildlife conflict, and confidence in the viability of pastoralism as a livelihood. However, these effects are not reflected in the quantitative results, possibly due to large spillovers of the control group making use of the AfriScout app.

Conclusion and policy implications

The two AfriScout models have strengths that may be leveraged in different contexts. Both have value for resilience and adaptive capacity, by filling critical information gaps (AfriScout Steward) and by formalising collective rangeland management (AfriScout Regen). However, the success of either model depends on specific design features and contextual preconditions as facilitating factors.

AfriScout Regen illustrates the efficacy of collective action and has significant value for rangeland regeneration. Notably, AfriScout Regen's success hinges on leveraging and building upon indigenous knowledge and traditional rangeland management systems. Historically, rangeland management in southern Ethiopia was highly participatory, emphasising collective decision-making, shared resources and consensus-building (Teso et al., 2016). Traditional practices also entailed herd mobility and division into wet- and dry-season grazing areas (Dika Godana, G., 2016), akin to the AMP grazing approach. Over recent generations, these traditional social structures and techniques have declined under pressures such as population growth, climate change, and government policies that favour sedentarisation and formal authority structures. These traditional practices remain influential to some degree, however (ibid.). For example, AfriScout Regen has successfully integrated traditional approaches and historical structures into its implementation to enhance buy-in and success. In this sense, similar collective approaches may be less effective or more challenging to implement in areas without pre-existing structures for collective rangeland management and decision-making. Furthermore, while AfriScout Regen may be highly effective from a regenerative standpoint, the model may not be as easily scalable as interventions such as AfriScout Steward. However, it may be more cost-effective than other conventional drought-related interventions for pastoralists, such as food assistance, destocking or reseeding grass.

In comparison, the evaluation of **AfriScout Steward** illustrates that interventions seeking to share information can be highly effective if they target individuals via digital platforms. A particular success factor of AfriScout Steward is the relevance of its information for its intended users, which stems from the co-creation process. There is also evidence of strong spillover effects in awareness and use of the app, which reflects a strong culture of information sharing. This could be leveraged to scale up the intervention cost-effectively.

However, while digital platforms for information dissemination may be relatively easy to implement and have a low cost per unit of implementation, programme planners must be cognisant of existing digital infrastructure. This includes smartphone ownership, digital literacy and network coverage, for example, which may facilitate or limit access.

The results of this Causal Design evaluation and other studies suggest that policy-makers should consider scaling the adapted AMP approach used by AfriScout Regen. AfriScout Steward is valued by pastoralists, but more research and refinement is needed for the app to realise its full potential to support pastoralist decision-making.

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About SPARC

Climate change, armed conflict, environmental fragility and weak governance and the impact these have on natural resource-based livelihoods are among the key drivers of both crisis and poverty for communities in some of the world's most vulnerable and conflict-affected countries.

Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises (SPARC) aims to generate evidence and address knowledge gaps to build the resilience of millions of pastoralists, agro-pastoralists and farmers in these communities in sub-Saharan Africa and the Middle East.

We strive to create impact by using research and evidence to develop knowledge that improves how the UK Foreign, Commonwealth and Development Office (FCDO), donors, non-governmental organisations, local and national governments and civil society can empower these communities in the context of climate change.

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